

Application Serial No. 10/519,249
Reply to Office Action of September 21, 2005

PATENT
Docket: CU-4032

Amendments To The Claims

The listing of claims presented below will replace all prior versions, and listings, of claims in the application.

Listing of claims:

1. (Currently amended) A device for protecting a ~~fi~~ber line against destruction by laser radiation, comprising:

a section of an optical ~~fi~~ber line having a first core diameter with a constant diameter throughout the length of said section, said first section of said optical fiber line having:

optical fiber cladding over a first section of said fiber line that is of a second diameter greater than said first core diameter; and

optical fiber cladding over a second section of said fiber line that is of a third diameter that is less than said second diameter but greater than said first core diameter, said second section being adjacent to said first section.

~~and a cladding of said optical fibre section, said cladding having at least at one part of length $L \geq 10 \cdot D$ of said optical fibre section a cross-section parameter d in the range $D < d \leq \min(4D, 40 \mu m)$, where D is the mode field diameter.~~

2. (Currently amended) The device according to claim 1, ~~characterized in that~~ wherein said optical ~~fi~~ber cladding is made of silica based glass.

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3. (Currently amended) The device according to claim 1, ~~characterized in that~~ wherein said optical ~~fi~~bre ~~fi~~ber section is formed directly in the ~~fi~~bre ~~fi~~ber line to be protected.

4. (Currently amended) The device according to claim 1, ~~characterized in that~~ wherein said optical ~~fi~~bre ~~fi~~ber section is further included into the ~~fi~~bre ~~fi~~ber line to be protected, e.g. by splicing or connecting by optical connectors.

5. (Currently amended) The device according to claim 1, ~~characterized in that~~ wherein said optical ~~fi~~bre ~~fi~~ber section is cylindrical, with the core having a constant diameter throughout the length of said section, and the cladding diameter d of the optical ~~fi~~bre ~~fi~~ber section at least at one part of length L , $L \geq 10 \cdot D$ of said optical ~~fi~~bre ~~fi~~ber section being in the range $D < d \leq \min(4D, 40 \text{ } \mu\text{m})$, where D is the mode field diameter.

6. (Currently amended) The device according to claim 5, ~~characterized in that~~ wherein said optical ~~fi~~bre ~~fi~~ber section is formed directly in the ~~fi~~bre ~~fi~~ber line to be protected.

7. (Currently amended) The device according to claim 1, ~~characterized in that~~ wherein said optical ~~fi~~bre ~~fi~~ber section is supplied to further into the ~~fi~~bre ~~fi~~ber line to be protected, ~~e.g.~~ by splicing or ~~connecting~~ by optical connectors.

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8. (New) The device according to claim 1, wherein said optical fiber section cladding has at least at section with a length $L \geq 10 \cdot D$ and a cross-section parameter d in the range $D < d \leq \min(4D, 40\mu\text{m})$, where D is the mode field diameter.

9. (New) A device for protecting a fiber line against destruction by laser radiation, comprising:

a section of an optical fiber line having a first core diameter with a constant diameter throughout the length of said section; and

a cladding of said optical fiber section, said cladding having at least at one part of length $L \geq 10 \cdot D$ of said optical fiber section a cross-section parameter d in the range $D < d \leq (4D, 40\mu\text{m})$, where D is the mode field diameter.

10. (New) The device according to claim 9, wherein said optical fiber cladding is made of silica based glass.

12. (New) The device according to claim 9, wherein said optical fiber section is formed directly in the fiber line to be protected.

13. (New) The device according to claim 9, wherein said optical fiber section is further included into the fiber line to be protected, e.g. by splicing or connecting by optical connectors.

14. (New) The device according to claim 9, wherein said optical fiber section is

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cylindrical, with the core having a constant diameter throughout the length of said section, and the cladding diameter d of the optical fiber section at least at one part of length $L \geq 10 \cdot D$ of said optical fiber section a cross-section parameter d in the range $D < d \leq (4D, 40 \mu\text{m})$, where D is the mode field diameter.

15. (New) The device according to claim 14, wherein said optical fiber section is formed directly in the fiber line to be protected.

16. (New) The device according to claim 9, wherein said optical fiber section is supplied into the fiber line to be protected by splicing or connecting by optical connectors.